

REMARKS

In an Office Action mailed on May 6, 2002, an objection was made to the title; claims 1, 2, 4, 6, 7, 9, 11-14, 16 and 17 were rejected under 35 U.S.C. § 102(e) as being anticipated by Elabd; and claims 3, 5, 8, 10 and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Elabd in view of Yanai. The limitations of claim 2 have been incorporated into claim 1; and the limitations of claim 7 have been incorporated into claim 6. The title has been amended to overcome the objection to the title. The rejections are discussed below in the corresponding sections.

A marked-up version of the amended claims is submitted as a separate document. The undersigned has endeavored to ensure that the clean and marked-up versions of the amended claims correspond. However, the Examiner is specifically requested to verify that these two versions of the claims are consistent.

Rejections of Claims 1 and 3-5:

As amended, the imager of claim 1 includes an array of pixel sensors. Each pixel sensor indicates at least two different primary color components of an image. For each pixel sensor, at least two storage locations are located in the array to store the indications from the pixel sensor. For each pixel sensor, the imager includes circuitry to during a first integration interval, couple the pixel sensor to one of the associated storage locations to store one of the indications from the sensor and during a second integration interval, couple the pixel sensor to another one of the storage locations to store another one of the indications from the sensor.

In contrast, Elabd teaches storing each color exposure that is captured by a sensor device in the storage register 490 after the images are captured, i.e., after the corresponding integration interval. In this manner, referring to lines 14-25 of column 5 of Elabd, the storage register 490 receives charge that is captured by photosensitive charge-forming elements 484. However, Elabd neither teaches nor suggests coupling a pixel sensor to one of the storage locations in the storage register 490 during an integration interval. Elabd also discusses image registers 500, 506 and 512 that “receive light from a colored image and integrate the charge packets produced by the succession of in color exposures and deliver them one at a time to light-shielded or opaque memory sites or storage registers.” Elabd, 5:56-64. Thus, these image registers 500, 506 and 512 capture one image at a time and integrate charge to capture these images. However, Elabd neither teaches nor suggests coupling a pixel sensor to two different storage locations during two

different integration intervals. Therefore, for at least these reasons, claim 1 overcomes the § 102 rejection in view of Elabd.

Claims 3-5 are patentable for at least the reason that these claims depend from an allowable claim.

Rejections of Claims 6 and 8-10:

As amended, the camera of claim 6 includes an array of pixel sensors. Each pixel sensor indicates at least two color components of an image. The camera also includes a programmable color filter that substantially covers the array, a controller to control the color filter to cause the pixel sensors to indicate the color components one at a time and for each pixel sensor, at least two storage locations that are located in the array to store the indications from the pixel sensor. The camera also includes for each pixel sensor, circuitry to during a first integration interval, couple the pixel sensor to one of the associated storage locations to store one of the indications from the sensor and during a second integration interval, couple the pixel sensor to another one of the storage locations to store another one of the indications from the sensor.

In contrast, as discussed above in connection with claim 1, Elabd neither teaches nor suggests circuitry that couples a particular pixel sensor to two different storage locations, where the coupling occurs during respective integration intervals. Thus, for at least this reason, claim 6 overcomes the § 102 rejection in view of Elabd.

Claims 8-10 are patentable for at least the reason that these claims depend from an allowable claim.

Rejections of Claims 11-17:

The method of claim 11 is for use with an imager and includes during a first integration interval, storing an indication of a first primary color component of an image in a pixel sensor array. The method also includes during a second integration interval, storing an indication of a second primary color component of the image in the array. The second primary color component is different from the first primary color component.

See discussion of claims 1 and 6 above. More particularly, Elabd neither teaches nor suggests storing indications of first and second primary color components of an image in a pixel sensor array during first and second integration intervals. Therefore, for at least this reason, claim 11 overcomes the § 102 rejection in view of Elabd.

Claims 12-17 are patentable for at least the reason that these claims depend from an allowable claim.

CONCLUSION

In view of the foregoing, withdrawal of the §§ 102 and 103 rejections and a favorable action in the form of a Notice of Allowance are requested. The Commissioner is authorized to charge any additional fees or credit any overpayment to Deposit Account No. 20-1504 (ITL.0061US).

Respectfully submitted,



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CLAIM AMENDMENTS

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Claims 1 and 6 have been amended as follows:

1. (Amended) An imager comprising:

an array of pixel sensors, each pixel sensor to indicate at least two different primary color components of an image; [and]

for each pixel sensor, at least two storage locations located in the array to store the indications from the pixel sensor; and

for each pixel sensor, circuitry to, during a first integration interval, couple the pixel sensor to one of the associated storage locations to store one of the indications from the sensor and, during a second integration interval, couple the pixel sensor to another one of the storage locations to store another one of the indications from the sensor.

6. (Amended) A camera comprising:

an array of pixel sensors, each pixel sensor to indicate at least two color components of an image;

a programmable color filter substantially covering the array;

a controller to control the color filter to cause the pixel sensors to indicate the color components one at a time; [and]

for each pixel sensor, at least two storage locations located in the array to store the indications from the pixel sensor; and

for each pixel sensor, circuitry to, during a first integration interval, couple the pixel sensor to one of the associated storage locations to store one of the indications from the sensor and, during a second integration interval, couple the pixel sensor to another one of the storage locations to store another one of the indications from the sensor.